REMARKS/ARGUMENTS

The Office Action mailed August 26, 2005 has been carefully considered together with each of the references cited therein. The amendments and remarks presented herein are believed to be fully responsive to the Office Action. Accordingly, reconsideration of the present Application in view of the following remarks is respectfully requested.

Applicant has amended the Application to attend to housekeeping matters and to more clearly describe the invention. In claim 1, the term "hydrotreating" was replaced with the term –hydrodechlorination–. In claim 1, the steps of providing the o-xylene and hydrogen chloride and recovering the o-xylene are now recited in the body of the claim. Support for this amendment can be found in the preamble of originally filed claim 1. Support for new claim 17 may be found in originally filed claim 1 and in Applicant's Specification at paragraphs [0003] and [00017]. It is not believed that any new matter was introduced by these amendments, and that no additional search is required by the office.

Claims 1-16 were rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement by reciting a hydrodechlorination process without reciting a hydrodechlorination step. The rejection of claim1, as amended, under 35 USC 112, first paragraph, as failing to comply with the enablement requirement by reciting a hydrodechlorination process without reciting a hydrodechlorination step should be removed in light of the above amendment. Claims 1-16 were rejected under 35 USC 112, second paragraph, as being indefinite for failing to particular point out and distinctly claim the subject matter which applicant regards as the invention for the failure to recite the recovery of the o-xylene in the body of the claim. The rejection of claim 1 under 35 USC 112, second paragraph, as being indefinite for failing to particular point out and distinctly claim the subject matter which applicant regards as the invention in light of the above amendment. The rejection of claims 2-16 under 35 USC 112, first paragraph and under 35 USC 112, second paragraph, should be removed for the reasons given hereinabove in support of claim 1 from which they depend.

Claims 1-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zorn et al. (US 3,493,626). The rejection of claim 1 under 35 U.S.C. 103(a) as being unpatentable over Zorn et al. (US 3,493,626) (hereinafter referred to as Zorn) should be withdrawn for the reason that Zorn teaches away from Applicant's invention and for the reason that the catalytic arts are unpredictable.

Zorn relates to a method for the hydrodechlorination of mixed nuclear mono-chlorinated m-xylenes. Zorn discloses a two-stage process for the hydrodechlorination of mixtures of 2-chloro-m-xylene and 4-chloro-m-xylene. In column 1, lines 40 to 55, Zorn discloses that was not possible to carry out the hydrochlorination of mixed chlorinated m-xylenes in a single stage process. To solve the problem, Zorn discloses a two-stage process, wherein the mixture of nuclear mono-chlorinated m-xylenes is first contacted with a non-noble metal catalyst comprising nickel or cobalt, or mixtures thereof to hydrodechlorinate the 4-chloro-m-xylene; and, following separation by distillation, the remaining 2-chloro-m-xylene is passed to a second stage reactor containing a noble metal catalyst for the separate conversion of the 2-chloro-m-xylene species to m-xylene (See Column 1 lines 45-53 and Examples 1-3 in column 2.). Thus, the hydrodechlorination process of Zorn as disclosed in the reference is a two-stage catalytic process which employs a first stage catalyst comprising a non-noble metal and a second stage catalyst comprising a noble metal, and further requires an intermediate separation step.

Applicant's invention relates to the problem of hydrodechlorination of nuclear mono- and poly-chlorinated o-xylene. Applicant discovered a method for the hydrodechlorination of nuclear mono- and poly-chlorinated o-xylene in a single-stage gas phase reaction in the presence of a noble metal catalyst to provide a hydrodechlorinated o-xylene product. Applicant's invention differs from Zorn in the following ways:

a) Applicant's invention relates to hydrodechlorination of nuclear mono- and polychlorinated **o-xylene**: Zorn only discloses hydrodechlorination of mono-chlorinated **m-xylene**.

b) Applicant's invention employs a **single reaction stage** and does not require any intermediate stage separation. **Zorn teaches away from a single stage process** by requiring two separate reactor stages and **uses a different catalyst system for each reactor stage.**

Catalyst activity is unpredictable, and modest changes in catalyst composition and/or the feedstock treated in a catalytic process can have a profound and unpredictable effects on the results obtained. This recognition of unpredictable catalyst behavior is well accepted in the catalyst art. Catalytic systems involve a high order of unpredictability. Since the manner in which catalysts operate is not fully understood, it is almost impossible to predict whether a given material will function as a catalyst without trial. Any rejection on this ground cannot be sustained. Even a minor change may produce a patentable invention where the result could not have been predicted beforehand by one skilled in the art.

One of the more difficult aspects of resolving questions of non-obviousness is the necessity to guard against slipping into use of hindsight. Many inventions may seem obvious to everyone after they have been made. However 35 USC 103 instructs us to inquire whether the claimed invention would have been obvious at the time of the invention was made to a person having ordinary skill in the art to which the subject matter pertains. In light of Applicant's evidence (See Applicant's Examples 1-3 in paragraphs [00024] to [00030] wherein mono-chlorinated o-xylenes, and mixtures of mono and polychlorinated o-xylenes are hydrodechlorinated to provide yields in excess of 90 percent producing o-xylene in a purity of 98 percent or better.), the argument that a chemist of ordinary skill in the art would have recognized a connection between a catalyst of the prior art and a different chemical species, being unsupported by objective evidence of record, fails to establish a prima facie case of obviousness.

A sustainable case of obviousness requires the prior art to provide motivation to one with ordinary skill in the art to arrive at the claimed invention. Here such motivation is absent. Furthermore, the prior art does not present to the ordinary

artisan a reasonable expectation of success that the modification advanced by the Office would yield.

Still further, Zorn teaches away from Applicant's single stage approach with specific requirements for a multi-stage, multi-catalyst approach, with inter-stage separation.

Therefore, the rejection of claim 1, as amended, under 35 U.S.C. 103(a) as being unpatentable over Zorn et al. (US 3,493,626)should be withdrawn for the reason that Zorn teaches away from Applicant's invention and for the reason that no one skilled in the art would be motivated or expect that the catalyst disclosed in Zorn which Zorn limited to one species of mono-chlorinated **m-xylene** would provide the benefits of Applicant's invention for the single stage hydrodechlorination of both mono and poly chlorinated **o-xylene**, which is different from m-xylene. Obvious-to-try is not the same as obviousness under 103.

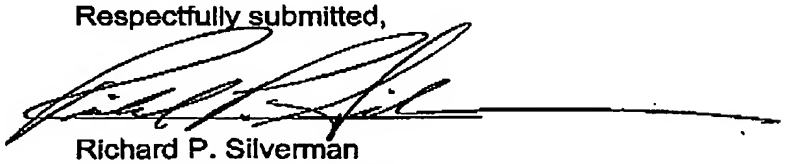
The rejection of claim 2-16 under 35 U.S.C. 103(a) as being unpatentable in view of Zorn et al. (US 3,493,626) should be withdrawn for the reasons given in support of amended claim 1 from which they depend.

Claim 17 should be allowable for the reasons given hereinabove in support of amended claim 1.

It is respectfully submitted that, in view of the above remarks, the rejections under 35 U.S.C. § 112 and §103 should be withdrawn and that this application is in a condition for an allowance of all pending claims. Accordingly, favorable reconsideration and an allowance of all pending claims are courteously solicited.

An early and favorable action is courteously solicited.

Respectfully submitted,



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